



US009680072B2

(12) **United States Patent**  
**Kurtin et al.**

(10) **Patent No.:** **US 9,680,072 B2**  
(45) **Date of Patent:** **Jun. 13, 2017**

(54) **QUANTUM DOT (QD) DELIVERY METHOD**

(56) **References Cited**

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(\*) Notice: Subject to any disclaimer, the term of this  
patent is extended or adjusted under 35  
U.S.C. 154(b) by 142 days.

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(21) Appl. No.: **14/799,495**

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(22) Filed: **Jul. 14, 2015**

(Continued)

(65) **Prior Publication Data**

US 2015/0318455 A1 Nov. 5, 2015

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**Related U.S. Application Data**

(63) Continuation-in-part of application No. 14/341,657,  
filed on Jul. 25, 2014, which is a continuation-in-part  
(Continued)

(51) **Int. Cl.**  
**H01L 33/56** (2010.01)  
**H01L 33/50** (2010.01)  
(Continued)

(52) **U.S. Cl.**  
CPC ..... **H01L 33/56** (2013.01); **B29C 31/06**  
(2013.01); **C08K 3/10** (2013.01); **C08K 7/00**  
(2013.01);  
(Continued)

(58) **Field of Classification Search**  
CPC ..... H01L 33/56; H01L 33/502  
See application file for complete search history.

(57) **ABSTRACT**

An LED is fabricated with a composite layer including quantum dots (QDs), wherein the QDs are provided in a silicone paste. A plurality of QD silicone paste reservoirs each contain a provided silicone paste with QDs of different wavelengths. Further, a silicone paste reservoir containing a clear silicone paste. A paste mixing chamber, in to which the QD paste reservoirs and the silicone paste reservoir supply their respective pastes, mixes together the pastes and form a mixed QD silicone paste. A silicone mixing and metering component receives the mixed QD silicone paste from the paste mixing chamber, and further receives A silicone and B silicone from a respective A silicone reservoir and a B silicone reservoir, measures, and mixes the mixed QD silicone paste with the A and B silicones to form a silicone polymer composite. A dispensing component receives to the silicone polymer composite from the mixing and metering component and dispenses the composite to a molding tool.

**7 Claims, 15 Drawing Sheets**

